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TITLE:

Intravascular catheter system for

implanting stent in

patient's body, has expandable stent

mounted onto

inflatable balloon at distal section

of catheter, so that

radial expansion of balloon expands

to implant stent

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Basic Abstract Text - ABTX (1):

NOVELTY - An expandable stent (16) is mounted onto an inflatable balloon

(14) mounted on distal section of a catheter shaft (11), such that radial

expansion of the $\underline{\text{balloon}}$ within the working range expands and implants the stent in the body.

Basic Abstract Text - ABTX (3):

(1) Stent implanting method which involves inserting the catheter system

into patient's body. The system is advanced to a desired region within a lumen

and the <u>balloon</u> is radially expanded by delivering inflation fluid through the

inflation lumen to the <u>balloon</u> interior chamber. The balloon is inflated to

produce uniform radial expansion of the balloon and to mount the stent. The

balloon is retracted radially to a wingless shape, and catheter is removed from

the patient's body with the stent remaining within the patient's body and

elastically recoils to a preinflation radial and axial

Basic Abstract Text - ABTX (4):

- (2) <u>Balloon</u> catheter which has a compliance of less than 0.045 mm/atm,
- 0.025-0.04 mm/atm and 0.025-0.03 mm/atm within an inflation pressure range of
- 6-19 atm and 10-19 atm. The $\underline{\text{balloon}}$ has a radial expansion of 1.5-4.0% at an
- inflation pressure of 150 \underline{psi} and an axial $\underline{compliance}$ of 0.1-0.25 mm/atm within
- 6-14 atm of inflation pressure. The polyurethane block copolymer has a
- flexural modulus of 150000-300000 psi and hardness of 55-75 Shore D. The length
- of balloon is increased by 5-15% within inflation pressure;

Basic Abstract Text - ABTX (5):

(3) Semi-compliant <u>balloon</u> making method which involves extruding the

tubular product and forming in a portion of a block copolymer. The heating

units are displaced at higher and lower rates to apply heat to the portions of

tubular product adjacent to heating unit. The product is heated at 90-105 deg.

C and radially expanded to outer diameter which is 7-8 times inner diameter and

heated at 110-140 deg. C and finally cooled to form the ${\tt semi-compliant}$

balloon.

Basic Abstract Text - ABTX (7):

ADVANTAGE - Balloon expands radially and uniformly without unwrapping wings,

when stent delivery <u>balloon</u> is pressurized. Provides improved control over the

placement of the implanted stent in human body by minimal axial growth of the

balloons during inflation. Provides more highly efficient
transfer of force to

the stent than with high pressure non-compliant $\underline{\textbf{balloons}}$ overcoming rigidity

and to size the stent. Improves control over the

dilatation of stenosis or implantation of a stent.

Basic Abstract Text - ABTX (11):
 Inflatable balloon 14

Title - TIX (1):

Intravascular catheter system for implanting stent in patient's body, has expandable stent mounted onto inflatable balloon at distal section of catheter, so that radial expansion of balloon expands to implant stent

Standard Title Terms - TTX (1):
 INTRAVASCULAR CATHETER SYSTEM IMPLANT STENT PATIENT
BODY EXPAND STENT MOUNT
INFLATE BALLOON DISTAL SECTION CATHETER SO RADIAL EXPAND
BALLOON EXPAND IMPLANT
STENT